

## The Burden of Asthma in Rhode Island 2009 - Highlights on Adults\*

TABLE 17. PERCENTAGE OF ADULTS WITH CURRENT ASTHMA THAT EXPERIENCED ASTHMA EPISODES BY MEASURES OF DISPARITY, RHODE ISLAND BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS), 2005–2006

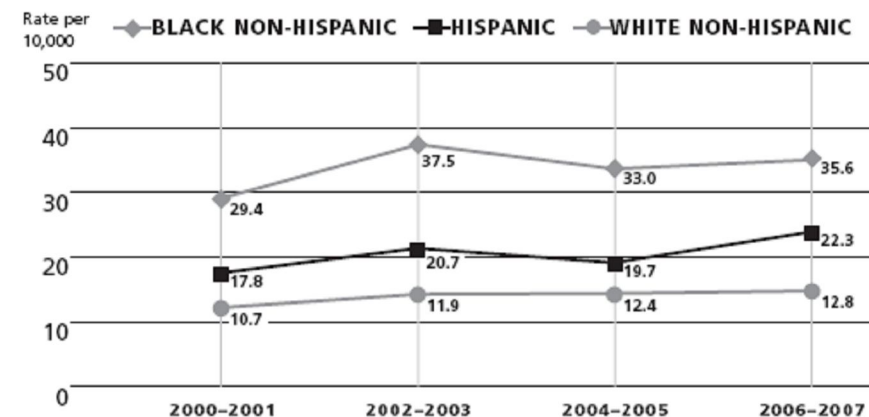
CHARACTERISTICS		ASTHMA SAMPLE <sup>1</sup>		
		ASTHMA ATTACK IN THE PAST YEAR % (95% CI)	USED CONTROLLER MEDICATION ALMOST DAILY IN PAST 30 DAYS TO PREVENT AN ATTACK % (95% CI)	USED RESCUE MEDICATION 5+ TIMES IN PAST 30 DAYS TO STOP ATTACK % (95% CI)
Sex	Male	41.9 (32.9 – 51.1)	45.1 (36.2 – 54.1)	28.0 (18.4 – 37.5)
	Female	48.0 (43.1 – 53.9)	40.8 (36.2 – 45.5)	21.2 (17.5 – 25.0)
Age group	18–64	49.2 (44.1 – 52.9)	38.3 (33.5 – 43.2)	24.2 (19.3 – 29.0)
	65 and older	28.4 (21.7 – 35.2)	64.4 (56.8 – 72.0)	20.3 (13.8 – 26.8)
Educational level	<12 years	48.8 (34.3 – 63.4)	41.9 (37.5 – 46.4)	–
	HS Diploma or higher	45.4 (40.9 – 49.9)	44.8 (30.2 – 59.2)	–
Household income	<\$25,000 per year	47.4 (37.5 – 57.4)	41.0 (35.8 – 46.2)	17.8 (13.6 – 22.0)
	> \$25,000 per year	43.6 (38.5 – 48.9)	40.2 (31.0 – 49.4)	36.6 (26.2 – 47.0)
Overall		45.9 (41.9 – 50.4)	42.3 (38.0 – 46.7)	23.6 (19.3 – 27.8)

– Sample sizes too small for analysis.

<sup>1</sup> Weighted data.

Data Source: 2005–2006 Rhode Island Behavioral Risk Factor Surveillance System combined file, Rhode Island Department of Health, Center for Health Data and Analysis.

FIGURE 27. AGE-ADJUSTED<sup>1</sup> ASTHMA<sup>2</sup> HOSPITALIZATION RATES,<sup>3</sup> BY RACE/ETHNICITY AND YEAR<sup>4</sup>, RHODE ISLAND HOSPITAL DISCHARGE DATA, 2000–2007



<sup>1</sup> Age-adjusted to the year 2000 U.S. standard population.

<sup>2</sup> Asthma listed as the principal diagnosis (ICD-9-CM codes 493.00 – 493.92).

<sup>3</sup> All rates are per 10,000 population.

<sup>4</sup> Years are combined in two-year intervals to have sufficient cases.

Data Source: 2000–2007 Rhode Island Hospital Discharge Data, Rhode Island Department of Health, Center for Health Data and Analysis.

\*All tables and figures are excerpted from *The Burden of Asthma in Rhode Island 2009 Report*

## The Burden of Asthma in Rhode Island 2009 - Highlights on Adults



Rhode Island Department of Health, September 2009  
Asthma Control Program

### Highlights

This report presents information on asthma prevalence, asthma triggers, and quality of life for Rhode Island adults with current asthma. Data excerpted here come from *The Burden of Asthma in Rhode Island 2009* report.

**About the Burden Report:** The purpose of this report is to describe the prevalence of asthma and asthma-related health outcomes in Rhode Island using the most recent data available. *The Burden of Asthma in Rhode Island* is an updated version of two earlier publications on the burden of asthma in the state, published in 2004 and 2007, respectively. Data for the current *Burden* report come from the Rhode Island Behavioral Risk Factor Surveillance System (BRFSS), the Rhode Island Youth Risk Behavior Survey (YRBS), Rhode Island Hospital Discharge Data (HDD), Rhode Island Emergency Department Data (EDD), and Rhode Island Vital Records. Data on asthma in children come from the Random Child Selection and the Child Asthma Prevalence Modules included in the 2005–2007 BRFSS.

**Current asthma:** Current asthma is defined as having been diagnosed with asthma and still having asthma at the time of the survey.

**Reading statistics:** This report presents bar graphs showing percentages and 95% confidence intervals (CI). Since percentages from survey data are estimates, the 95% CI indicates the range of values within which the “true” value lies 95% of the time. When two groups have 95% CI that overlap, it indicates that the “true” values are likely to be similar in both groups. If the 95% CI do not overlap, it indicates that the two groups are statistically significantly different from one another.

**Acknowledgements:** This publication was supported by Cooperative Agreement Number 1U59EH000524-01 from the Centers for Disease Control and Prevention (CDC). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the CDC. Rhode Island Behavioral Risk Factor Surveillance System data for 2000–2007 are provided by the Center for Health Data and Analysis, Rhode Island Department of Health, and supported in part by the National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention Cooperative Agreement U58/CCU100589 (1990–2002), U58/CCU122791 (2003–2007).

**For further information:** For the Asthma Control Program go to <http://www.health.ri.gov/disease/asthma/index.php>; for the BRFSS go to <http://www.health.ri.gov/chic/statistics/brfss.php>, <http://www.health.ri.gov/webquery/index.html>, <http://www.cdc.gov/brfss>, or contact the Asthma Control Program, Rhode Island Department of Health at 401-222-4040.

**Highlights prepared by:** NJ Everage, ScM, N Sutton RD, MS, DN Pearlman, PhD, and D Goldman RN, MPH, from the Division of Community Health, Family Health, and Equity.

Excerpts from *The Burden of Asthma in Rhode Island 2009* report:

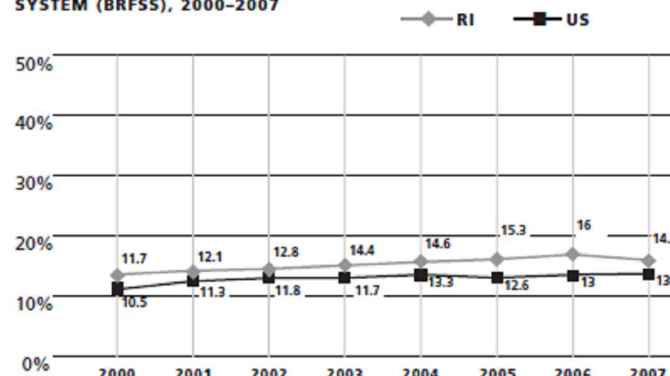
- ❖ Rhode Island adults have higher rates of current and lifetime asthma than compared to the United States as a whole (Figures 5 and 6). Table 6 displays the prevalence of current asthma within demographic subgroups. Asthma is more common among (1) women than men, (2) persons with household incomes of \$25,000/yr or less than those with incomes of \$50,000/yr or more, (3) adults with less than a high school diploma, (4) Hispanics vs white non-Hispanics, and (5) people 65 and over vs. those 18–64.
- ❖ Medicare was the largest payer for asthma hospitalizations, followed closely by commercial insurance (Figure 30).
- ❖ Figure 23 displays the percentage of people receiving flu vaccinations by age, and overall, 57% of persons with asthma received a flu vaccine compared to only 47% of persons without asthma.
- ❖ Table 17 shows that adults with asthma aged 18–64 had more asthma attacks than those 65 and older. However, more of those with asthma aged 65 and older utilized controller medication almost daily to prevent attacks.
- ❖ Figure 27 shows extreme differences in age-adjusted asthma hospitalization rates by race and ethnicity. Black non-Hispanic adults have 35.6 asthma hospitalizations per 10,000 people versus 22.3 for Hispanics and 12.8 for white non-Hispanics.

**Discussion:** Rhode Island is making great strides in improving the quality of life for people with asthma. The Rhode Island Department of Health’s Asthma Control Program and the Asthma Coalition and its committees are committed to securing a high measure of quality of life for all Rhode Islanders who have asthma and their families. The *Reducing the Burden of Asthma in Rhode Island, Asthma State Plan 2009–2014* and community interventions focus on asthma management through chronic care and disease management and healthy housing.



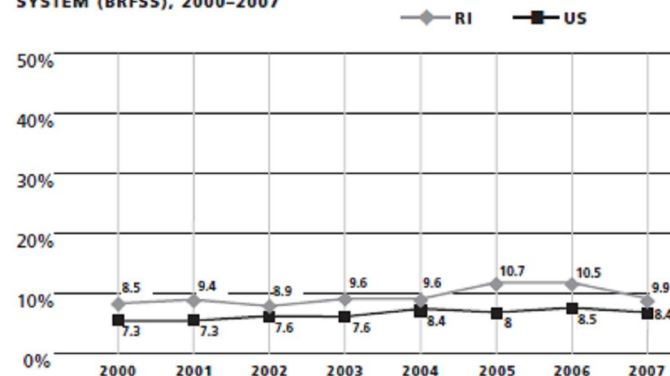
## The Burden of Asthma in Rhode Island 2009 - Highlights on Adults\*

FIGURE 5. TRENDS IN LIFETIME ADULT ASTHMA PREVALENCE BY YEAR, U.S. AND RHODE ISLAND BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS), 2000-2007



Data Source: 2000-2007 National and Rhode Island Behavioral Risk Factor Surveillance System.

FIGURE 6. TRENDS IN CURRENT ADULT ASTHMA PREVALENCE BY YEAR, U.S. AND RHODE ISLAND BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS), 2000-2007



Data Source: 2000-2007 National and Rhode Island Behavioral Risk Factor Surveillance System.

TABLE 6. DISPARITIES IN CURRENT ADULT ASTHMA PREVALENCE, RHODE ISLAND BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS), 2003-2007

		ASTHMA SAMPLE	
CHARACTERISTICS OF ADULTS (18+ YRS)		UNWEIGHTED SAMPLE <sup>1</sup>	CURRENT ASTHMA PREVALENCE % (95% CI) <sup>2</sup>
Sex	Male	7,784	6.9 (6.2 – 7.6)
	Female	13,137	12.9 (12.2 – 13.7)
Age group	18-64	15,456	10.5 (9.9 – 11.2)
	65 and older	5,215	8.1 (7.3 – 9.0)
Educational level	< 12 years	2,266	13.2 (11.1 – 15.2)
	HS Diploma or higher	18,601	9.7 (9.2 – 10.3)
Household income	< \$25,000 per year	4,747	12.3 (11.0 – 13.5)
	> \$25,000 per year	13,047	9.4 (8.8 – 10.0)
Race/Ethnicity	Hispanic	1,670	7.6 (5.9 – 9.2)
	Black non-Hispanic	656	11.1 (8.1 – 14.0)
	White non-Hispanic	17,727	10.3 (9.7 – 10.8)
Overall		20,921	10.1 (9.5 – 10.6)

<sup>1</sup> Sample of respondents with a "yes" or "no" response to the question about current asthma.

<sup>2</sup> Weighted data.

Data Source: 2003-2007 Rhode Island Behavioral Risk Factor Surveillance System combined file, Rhode Island Department of Health, Center for Health Data and Analysis.

## The Burden of Asthma in Rhode Island 2009 – Highlights on Adults\*

TABLE 16. PERCENTAGE OF ADULTS WITH CURRENT ASTHMA THAT EXPERIENCED ASTHMA SYMPTOMS IN THE PAST MONTH BY MEASURES OF DISPARITY, RHODE ISLAND BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS), 2002, 2005-2006

		ASTHMA SAMPLE	
CHARACTERISTICS		UNWEIGHTED SAMPLE <sup>1</sup>	ASTHMA SYMPTOMS <sup>2</sup> PERCENTAGE (95% CI) <sup>2</sup>
Sex	Male	291	49.3 (41.9 – 56.7)
	Female	900	46.2 (42.1 – 50.2)
Age group	18-64	944	46.2 (42.0 – 50.4)
	65 and older	237	54.0 (46.8 – 61.3)
Educational level	< 12 years	164	58.4 (47.5 – 69.3)
	HS Diploma or higher	1,026	45.4 (41.6 – 49.2)
Household income	< \$25,000 per year	328	60.7 (53.5 – 67.9)
	> \$25,000 per year	687	42.0 (37.6 – 46.4)
Race/ethnicity <sup>4</sup>	Minority	174	42.3 (33.2 – 51.4)
	White, non-Hispanic	1,002	48.5 (44.4 – 52.5)
Overall		1,191	47.2 (43.5 – 50.9)

<sup>1</sup> Sample of respondents with a "yes" or "no" response to the question about asthma symptoms.

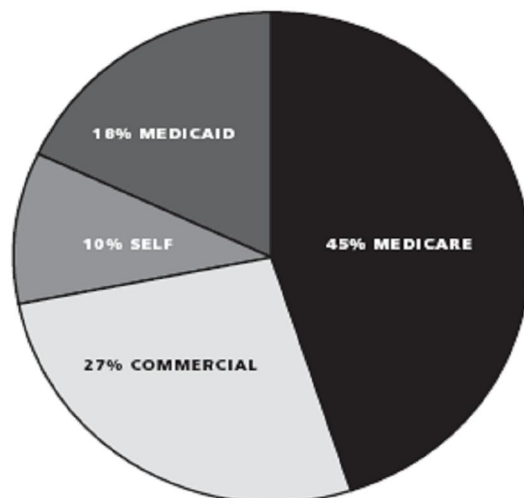
<sup>2</sup> Asthma symptoms reported at least once or twice a week to daily.

<sup>3</sup> Weighted data.

<sup>4</sup> Race/ethnicity: Minorities include persons of Hispanic origin of any race as well as non-Hispanic blacks and non-Hispanics in the "other" race category, which includes Asian Americans, American Indians, and persons of "Two or More Races." These groups are combined due to their small populations, which prevent meaningful statistical analyses of the groups individually.

Data Source: 2002, 2005-2006 Rhode Island Behavioral Risk Factor Surveillance System combined file, Rhode Island Department of Health, Center for Health Data and Analysis.

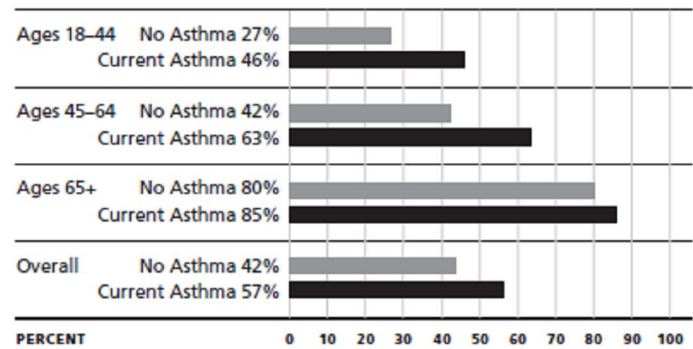
FIGURE 30. PRIMARY PAYER FOR ASTHMA HOSPITALIZATIONS AMONG ADULTS (18+), RHODE ISLAND HOSPITAL DISCHARGE DATA, 2007<sup>1</sup>



<sup>1</sup> Asthma listed as the principal diagnosis (ICD-9-CM 493.00 – 493.92).

Data Source: 2007 Rhode Island Hospital Discharge Data, Rhode Island Department of Health, Center for Health Data and Analysis.

FIGURE 23. PERCENTAGE OF ADULTS VACCINATED FOR FLU IN THE PAST YEAR BY CURRENT ASTHMA STATUS AND BY AGE GROUP, RHODE ISLAND BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS), 2007



Data Source: 2007 Rhode Island Behavioral Risk Factor Surveillance System, Rhode Island Department of Health, Center for Health Data and Analysis.

\*All tables and figures are excerpted from *The Burden of Asthma in Rhode Island 2009 Report*

\*All tables and figures are excerpted from *The Burden of Asthma in Rhode Island 2009 Report*